

# Research in Brief



Issue No 2023-09

Publication Date September 8 2023

ISSN 2092-7117

Building D, 370 Sicheong-daero, Sejong City 30147 KOREA **Korea Institute for Health & Social Affairs**

## Poverty Trends and Influencing Factors for People with Disabilities in the 2010s<sup>1)</sup>

**Wonjin Lee**

Research Fellow, KIHASA

Our analysis of trends in the poverty rate and their influencing factors, conducted using data from the Survey of Household Finances and Living Conditions, revealed that the disposable-income poverty rate for disabled persons declined from 47.0 percent in 2012 to 43.0 percent in 2016. In the years 2016 through 2020, a period examined based on combined data—survey data supplemented with administrative records—the disposable-income poverty rate declined from 40.7 percent to 39.6 percent. Despite the continuous expansion of public transfers, disabled people did not see their disposable-income poverty rate fall all that much because of the increase in their market-income poverty rate. Our in-depth examination revealed that the rise in the market-income poverty rate among disabled people can be attributed to changes in their sociodemographic composition. These changes included aging, an increasing share of one-person households, and a declining proportion of disabled individuals cohabitating with non-disabled family members.

### Introduction: objective and method

*[The need for the analysis of trends in poverty rates for people with disabilities]*

There is no shortage of information on cross-sectional characteristics of income and poverty among people with disabilities. They are found to have less income and higher inequality and poverty rates compared to people without disabilities. Their income levels and poverty rates are affected mostly by

1) This is an abridged reworking of Chapter 3 of *A Study on the Causes of Changes in Income Distribution and the Effect of Income Security for Persons with Disabilities* (2022), by Ukchan Oh, Wonjin Lee, and Dawon Um.

their economic activities and income protection programs.

However, time-series analysis of income and poverty among people with disabilities is in short supply. There do exist a few studies that analyzed the income and poverty of the population with disabilities, but they are primarily trend analyses of income distribution based on panel survey data. This study examines trends in poverty rates among people with disabilities in the 2010s and their influencing factors using the Survey of Household Finances and Living Conditions.

*[Analysis Method]*

This study used data from the Survey of Household Finances and Living Conditions.<sup>2)</sup> To account for the time-series break resulting from the combination of survey and administrative data, we presented findings for two separate periods: 2012 through 2016, and 2016 through 2020. The analysis for the earlier period is based on survey data alone, while for the other period we used combined data.<sup>3)</sup>

By “income” we mean equivalized income, that is, the total household income divided by the square root of the number of household members. We assigned the resulting amount to household members in order to take individuals as the unit of analysis.<sup>4)</sup> The poverty line is set at 50 percent of the median disposable income.

**[Table 1] Income defined**

Earned income	Labor income	Primary income	Market income	Disposable income
Business income				
Property income				
Private transfers: interhousehold transfer income; transfer income from non-profit organizations				
(-) Private transfer expenditure: interhousehold transfer expenditure; transfers non-profit organizations				
Public transfer income: public pension, basic (old-age) income, child-related benefits, disability-related benefits, National Basic Living Security benefits, low-income workers' subsidy, home childcare allowance, covid-19 allowance, etc.				
(-) Public transfer expenditure: tax; social insurance contributions				

Source: Wonjin Lee et al. *A Study of Income Distribution Changes and Influencing Factors*. 2022. KIHASA

2) The number of sample cases for the examined years ranges from 44,034 to 53,709, with cases of people with disabilities numbering between 1,889 and 2,281.

3) Survey data refers to income data collected through surveys, and combined data refers to survey data supplemented with administrative data from the National Tax Service, the Ministry of Health and Welfare, and the National Pension Service.

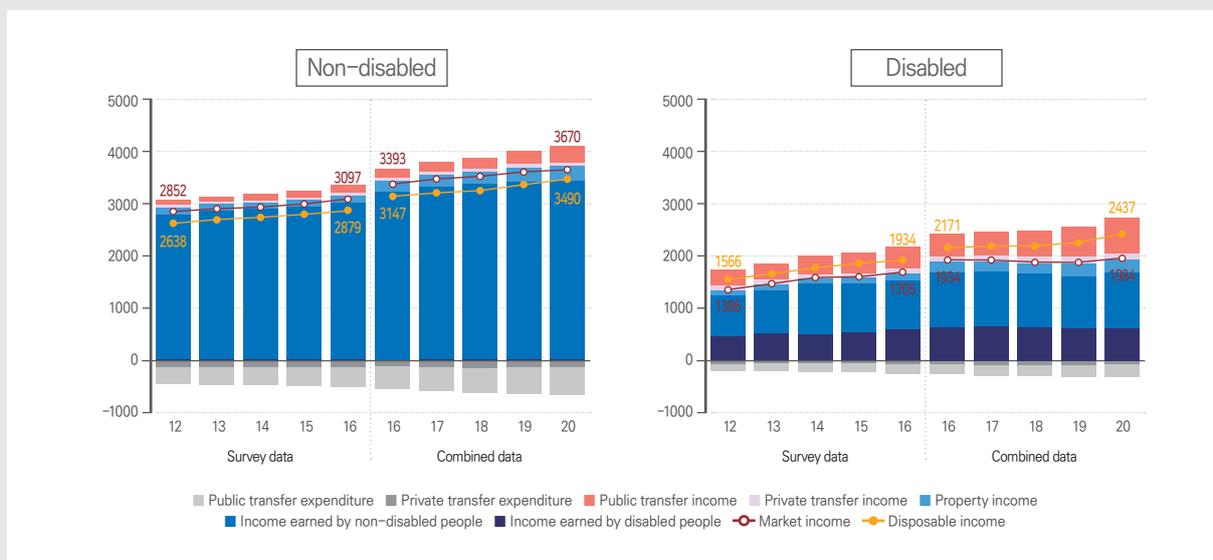
4) A disabled person in poverty here refers to a disabled person belonging to a household whose equivalized income is below the poverty line. The equivalized amount calculated using the total of all members' incomes determines the poverty status of the household's members, both disabled and non-disabled.

## Trends in income and poverty rates among people with disabilities

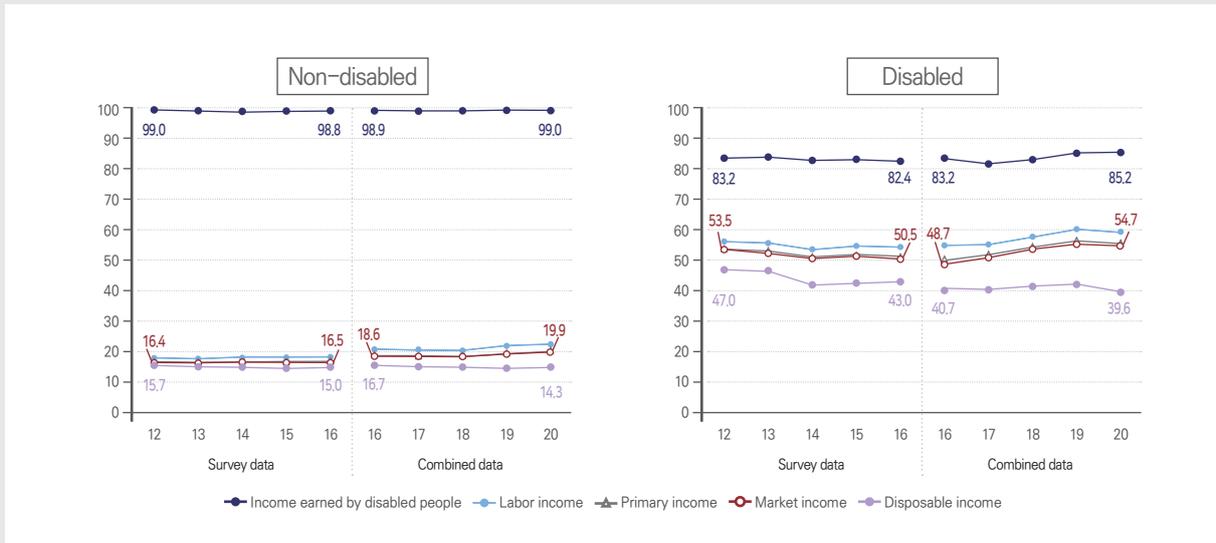
The average amount of disposable income for people with disabilities in 2020 was KRW 24.37 million, around 70 percent of the average for non-disabled people. Compared to non-disabled people, disabled people received more in both public and private transfers, but the amount of labor income they had from labor market participation was substantially smaller than the labor income earned by non-disabled people. Public transfer income has grown over time for people with disabilities, while their market income has largely stayed stagnant since the mid-2010s.

Public transfers and the labor income of non-disabled household members contributed to the decline in the poverty rate of disabled people, with only 15 percent of them found to have earned on their own in 2020 a market income equal to or above the poverty line. According to survey data, the market poverty rate for disabled people decreased from 53.5 percent in 2012 to 50.5 percent in 2016. However, when we consider the combined data, the market poverty rate actually increased from 48.7 percent in 2016 to 54.7 percent in 2020. The disposable-income poverty rate for disabled people declined from 47.0 percent to 43.0 percent between 2012 and 2016 and from 40.7 percent to 39.6 percent between 2016 and 2020. The fact that the disposable-income poverty rate for disabled people has not increased despite the increase from 2016 on in their market income poverty rate can be attributed in large part to the expansion of public transfer. The difference between the disposable-income poverty rate and the market income poverty rate, namely the net poverty reduction effect of public transfers, increased from 8.0 percentage points in 2016 to 15.1 percentage points in 2020.

[Figure 1] Income sources, market income, disposable income for disabled and non-disabled members in households led persons 2021~2020 (in 10,000 won, year, 2020 value)



[Figure 2] Labor income, primary income, market income, and disposable income, by non-disabled and disabled persons 2012~2020 (in %)



Note: The figure represents the distribution of in equalized household income for individuals. Income earned by disabled people refers to labor income earned by household members with disabilities.

Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)



## Factors affecting trends in poverty rates for disabled people

### [Analysis method]

We used a reweighting method in our analysis of factors affecting trends in the poverty rate. The samples of disabled individuals for years 2013 through 2020 were reweighted so that the distribution of sex, age, household types, and employment status matched the reference distribution in 2012. We interpreted the difference in the poverty rate among disabled people between before and after reweighting as the impact of changes in sociodemographic characteristics on the poverty rate.

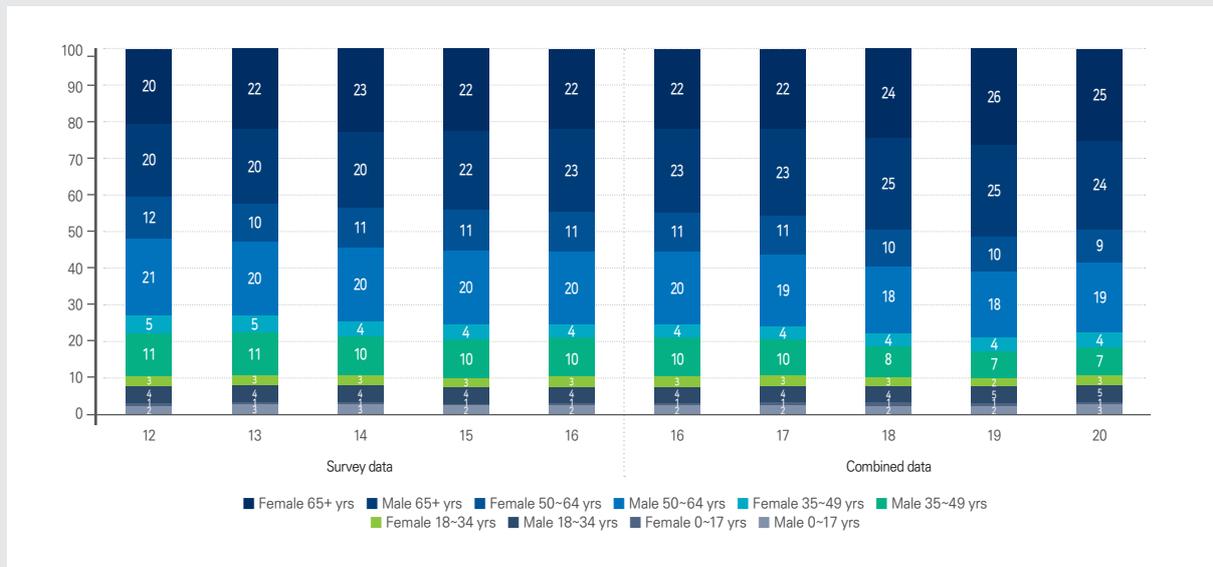
The reweighting factor we used can be expressed as follows:  $\psi_{G=g} = \Pr_{G=g}^{T=1} \div \Pr_{G=g}^{T=t}$ , where  $\Pr_{G=g}^{T=t}$  represents the population share of  $g$  th subgroup in a given sample at time  $T=t$ .

### [Effect of changes in sex-age distribution]

Figure 3 clearly shows that the overall population of disabled people has aged throughout the 2010s. The proportion of women aged 65 and over in the population with disabilities increased from 20 percent in 2012 to 26 percent in 2019. Men aged 65 and over as a share of the disabled population increased from 20 percent to 25 percent during the same period. Since the poverty rate is higher among elderly persons with disabilities than among non-elderly persons with disabilities, the aging of the population with disabilities has led to an increase in the poverty rate among people with disabilities (see Figure 4). For example, in 2020, the market income poverty rate for the disabled population was 54.7 percent, but it

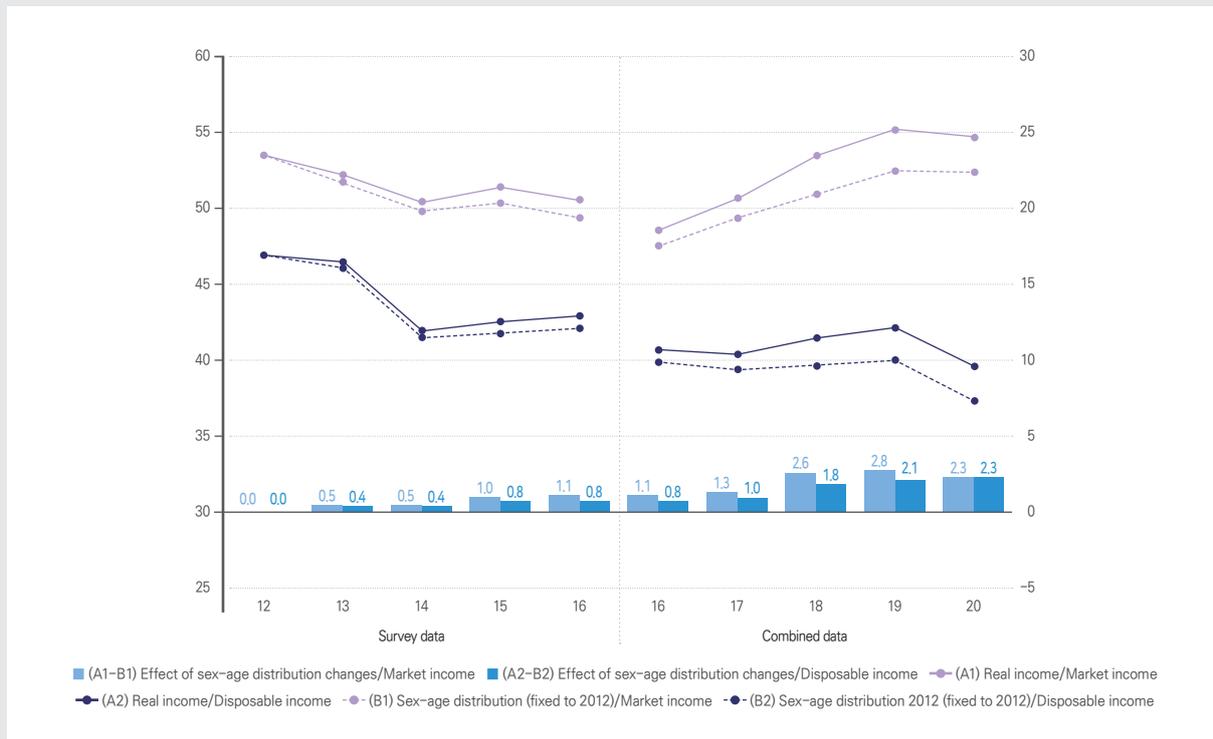
would have been 52.4 percent if the sex-age distribution had remained the same as in 2012. This means there was a 2.3 percentage-point increase in the market-income poverty rate of the population with disabilities in 2020. The disposable-income poverty rate also increased by 2.3 percentage points during the same period.

[Figure 3] Sex-age distribution among the population with disabilities 2012~2020 (in %)



Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

[Figure 4] Effect of sex-age distribution changes on market-income and disposable income poverty rates among people with disabilities, 2012~2020 (in %; %p)



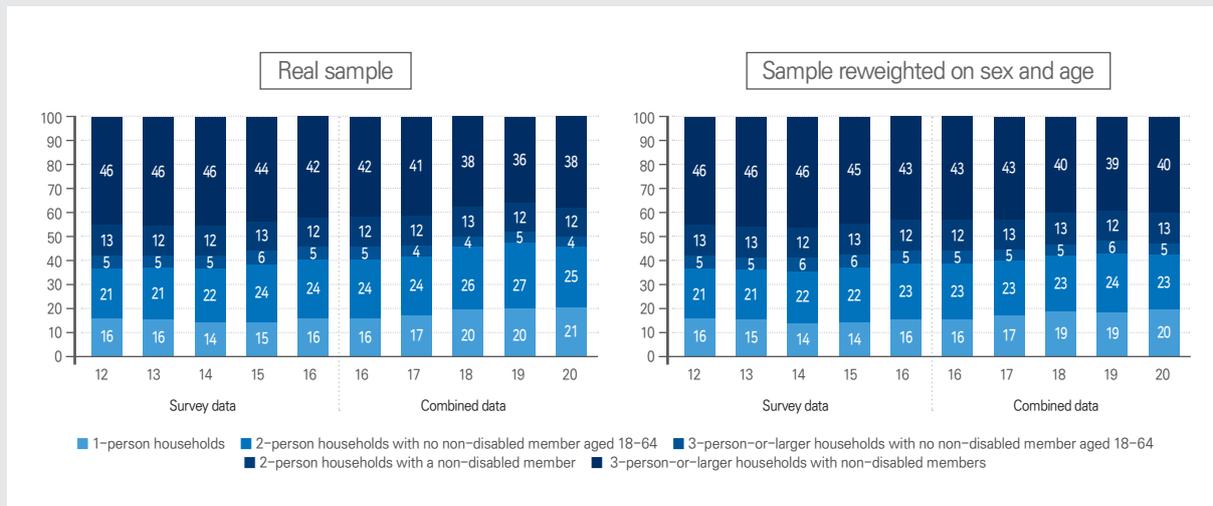
Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

[Effect of changes in household-type distribution<sup>5)</sup>]

As illustrated in Figure 5, one-person households as a share of households with disabled members increased from 16 percent in 2012 to 21 percent in 2020. Between 2012 and 2020, the proportion of two-person households with no non-disabled member between the ages of 18 and 64 increased from 21 percent to 25 percent. Among households with disabled persons, the proportion of those with three or more members, including at least one aged between 18 and 64 without disabilities, declined sharply from 46 percent in 2012 to 38 percent in 2020. When we adjusted the sex-age distribution from 2012 to 2020 to match the distribution in 2012, the changes in household-type distribution became less noticeable. However, the decline in the proportion of households with three or more members where at least one is between 18 and 64 years of age and without disabilities, remained clearly observable.

5) Household-type distribution among households with disabled members are affected by changes in sex-age distribution among those with disabilities. For instance, if disabled older persons are more likely to live alone than non-disabled older persons, the aging of the population with disabilities is likely to increase the proportion of one-person households among those with disabled members. With this in mind, this study examines how changes in household types affect the poverty rate among households with disabled members, with changes in the sex-age profile of disabled persons controlled for.

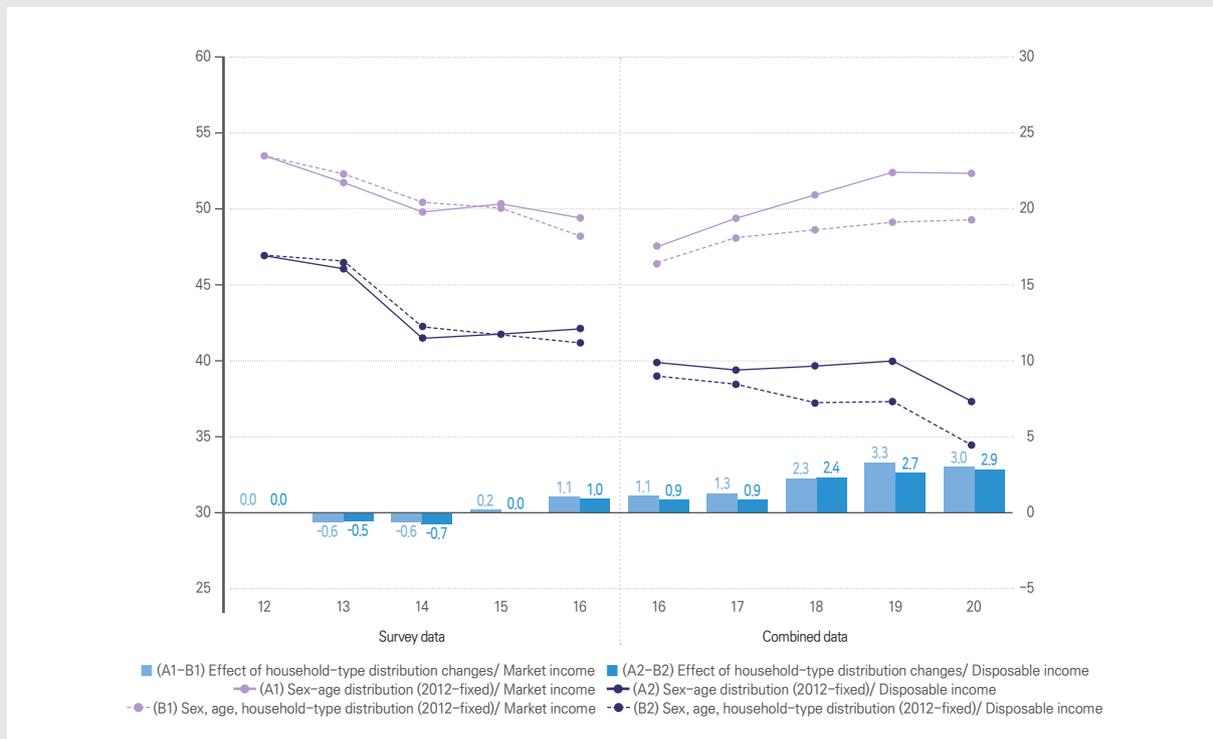
[Figure 5] Household-type distribution among people with disabilities 2012~2020



Note: The reweighted sample was reweighted to match the sex-age distribution of the 2012 sample.

Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

[Figure 6] Effect of household-type distribution changes on market-income and disposable-income poverty rates among people with disabilities, 2012~2020 (in %; %p)



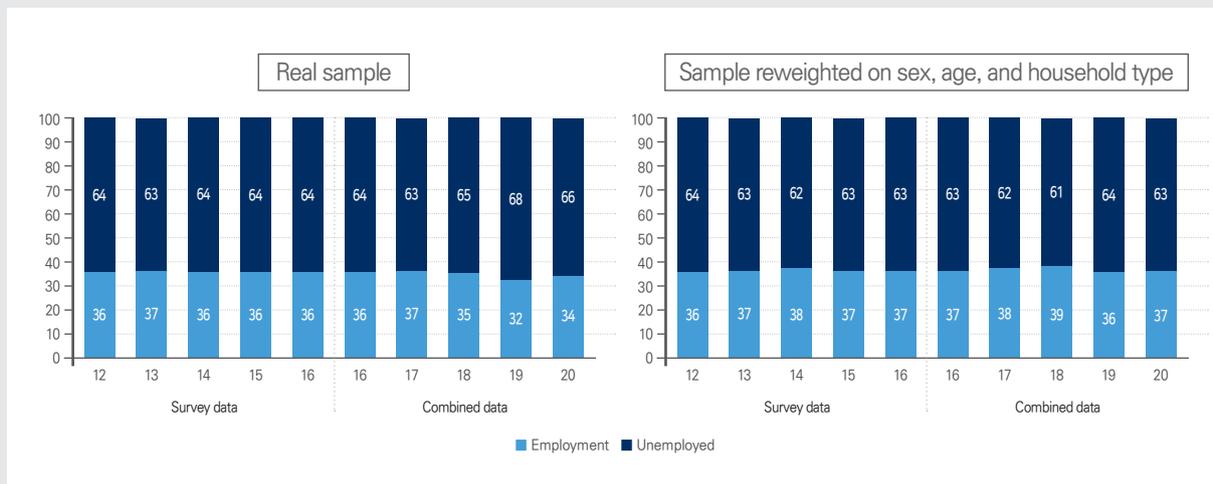
Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

Part of the increase in the poverty rate among people with disabilities can be attributed in part to changes in their household composition, such as a decreasing proportion of households of three or more members, with at least one among them aged between 18 and 64 without disabilities, a subtype where the poverty rate is significantly lower than among other subtypes of households with disabled members (see Figure 6). When the sex-age distribution among disabled people was adjusted to match the distribution in 2012, their market-income poverty rate in 2020 was 52.4 percent; when their sex-age and household-type distributions were reweighted to match the corresponding distributions in 2012, the market-income poverty rate of disabled people was 49.3 percent in 2020. The change in the distribution of household types among people with disabilities resulted in an increase of their market-income poverty rate by 3 percentage points in 2020. Additionally, this change is estimated to have increased the disposable-income poverty rate of disabled people by 2.9 percentage points in 2020.

*[Effect of changes in the employment rate]*

Figure 7 illustrates that the employment rate of people with disabilities declined from 36 percent in 2021 to 34 percent in 2020. The decrease can be attributed to the aging of the population with disabilities. When the sex-age and household-type distributions of people with disabilities were aligned with those 2012, the employment rate increased from 36 percent in 2012 to 37 percent in 2020.

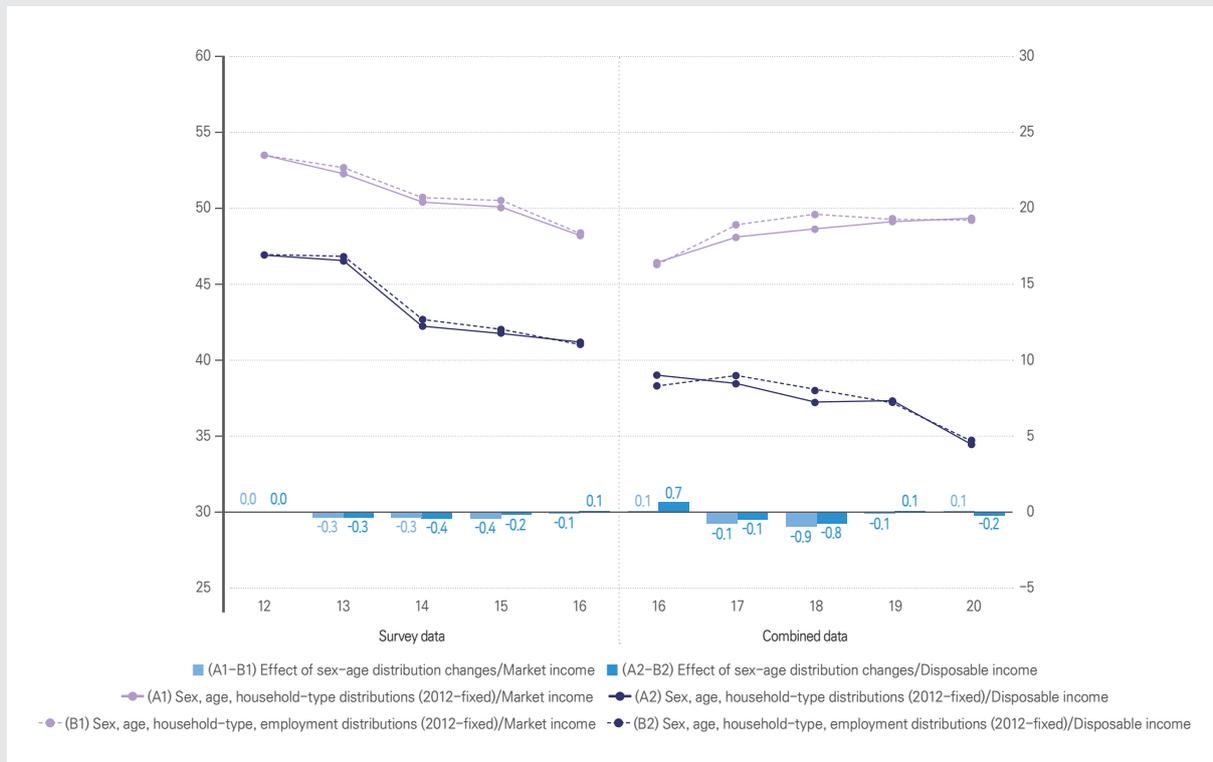
**[Figure 7] Employment distribution among people with disabilities, 2012~2020 (in %)**



Note: The reweighted sample was reweighted on sex, age, household type to match the distributions in the 2012 sample.

Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

[Figure 8] Effect of employment rate changes on market-income and disposable income poverty rates among people with disabilities, 2012~2020 (in %; %p)



Source: Statistics Korea. Survey of Household Finances and Living Conditions (doi: 10.23333/R.930001.001)

As shown in Figure 8, changes in the employment rate among people with disabilities did not significantly affect their poverty rate. When age, sex, and household type are controlled for, the increase in the employment rate led to a decrease in the poverty rate among disabled people. However, except for the years 2017 and 2018, the employment rate remained relatively stable, and its impact on the poverty rate of people with disabilities was not significant.

## Concluding remarks

Our analysis of poverty trends among disabled persons suggests the need for developing a combination of income-protection policies for older people with disabilities. To mitigate the impact of the aging of the population with disabilities on the poverty levels of older people with disabilities, it is essential to significantly reduce their disposable-income poverty. The ongoing discussion about restructuring the old-age income protection system has not adequately considered how to provide old-age income protection for people with disabilities, among whom participation in the National Pension

is low as often their employment is rather unstable and their work history mostly short. An appropriate policy mix needs to be sought in connection with the discussion of restructuring the old-age income protection system, especially in defining the inter-supplementary roles of the disability pension, the basic pension, and the National Pension.

Changes in the composition of households with disabled members were found to have increased the poverty rate among people with disabilities, even with the aging of the population with disabilities controlled for. There is a need to provide increased employment and income support, in addition to assistance with daily living, mobility, healthcare, and housing, for persons with disabilities so that they can live on their own without having to rely on institutional living arrangements or their families.

Policies aimed at supporting the employment of disabled people have improved over time. However, these efforts have not resulted in a significant improvement in their employment rates. Assisting individuals with disabilities in engaging in more economic activities and securing higher-quality jobs helps them not only increase their labor income but also qualify for income protection programs linked to employment, such as the earned income subsidy. In the long-term, this would lead to more disabled individuals participating in the National Pension over extended periods of time, thereby increasing their old-age pension receipt rate and the amount they receive.